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FILE 'USPATFULL' ENTERED AT 17:10:42 ON 01 DEC 2004
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=> s carrier and bioresorbable
L1 524 CARRIER AND BIORESORBABLE

=> s l1 and biocompatible
L2 367 L1 AND BIOCOMPATIBLE

=> s BMP
L3 22208 BMP

=> s OP
L4 69969 OP

=> s l3 and l4
L5 2177 L3 AND L4

=> s l5 and l2
L6 38 L5 AND L2

=> d 16 ti abs ibib tot

L6 ANSWER 1 OF 38 USPATFULL on STN
TI In-situ formed intervertebral fusion device and method
AB An orthopedic device for implanting between adjacent vertebrae comprising: an arcuate balloon and a hardenable material within said balloon.

In some embodiments, the balloon has a footprint that substantially corresponds to a perimeter of a vertebral endplate. An inflatable device is inserted through a cannula into an intervertebral space and oriented so that, upon expansion, a natural angle between vertebrae will be at least partially restored. At least one component selected from the group consisting of a load-bearing component and an osteobiologic component is directed into the inflatable device through a fluid communication means.

ACCESSION NUMBER: 2004:293217 USPATFULL
TITLE: In-situ formed intervertebral fusion device and method
INVENTOR(S): DiMauro, Thomas M., Southboro, MA, UNITED STATES
Slivka, Michael Andrew, Taunton, MA, UNITED STATES
Malone, John Daniel, Cumberland, RI, UNITED STATES
Moore, Bradley Thomas, Barrington, RI, UNITED STATES
Serhan, Hassan, South Easton, MA, UNITED STATES
Kadiyala, Sudhakar, South Easton, MA, UNITED STATES
Bartish, Charles M., JR., Providence, RI, UNITED STATES
Woodrow, Hal Brent, Princeton, NJ, UNITED STATES
Rohr, William L., Palm Beach Gardens, FL, UNITED STATES
Kelly, James Edward, North Easton, MA, UNITED STATES
Cooper, Kevin, Flemington, NJ, UNITED STATES

PATENT ASSIGNEE(S) : Aquino, Lauren, Boston, MA, UNITED STATES
DePuy Spine, Inc., Raynham, MA (U.S. corporation)

| | NUMBER | KIND | DATE |
|---------------------|----------------|------|---------------|
| PATENT INFORMATION: | US 2004230309 | A1 | 20041118 |
| APPLICATION INFO.: | US 2004-778684 | A1 | 20040213 (10) |

| | NUMBER | DATE |
|-----------------------|--|---------------|
| PRIORITY INFORMATION: | US 2003-448221P | 20030214 (60) |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | APPLICATION | |
| LEGAL REPRESENTATIVE: | HAMILTON, BROOK, SMITH & REYNOLDS, P.C., 530 VIRGINIA ROAD, P.O. BOX 9133, CONCORD, MA, 01742-9133 | |
| NUMBER OF CLAIMS: | 104 | |
| EXEMPLARY CLAIM: | 1 | |
| NUMBER OF DRAWINGS: | 28 Drawing Page(s) | |
| LINE COUNT: | 5024 | |

L6 ANSWER 2 OF 38 USPATFULL on STN
TI Transdiscal administration of specific inhibitors of p38 kinase
AB The present invention relates to injecting a high specificity p38 kinase inhibitor into a diseased intervertebral disc.

ACCESSION NUMBER: 2004:292789 USPATFULL
TITLE: Transdiscal administration of specific inhibitors of p38 kinase
INVENTOR(S) : DiMauro, Thomas M., Southboro, MA, UNITED STATES
Serhan, Hassan, South Easton, MA, UNITED STATES
Attawia, Mohamed, Canton, MA, UNITED STATES
Grace, Melissa, Raynham, MA, UNITED STATES
Kadiyala, Sudhakar, South Easton, MA, UNITED STATES
Urbahns, David, Barrington, RI, UNITED STATES
Bruder, Scott, Sudbury, MA, UNITED STATES
Collins, Gregory, East Sandwich, MA, UNITED STATES
Brown, Laura J., Hamilton Square, NJ, UNITED STATES
Geesin, Jeff, Doylestown, PA, UNITED STATES
Plouhar, Pamela L., South Bend, IN, UNITED STATES
Smith, Catherine, East Falmouth, MA, UNITED STATES
Siekierka, John, Towaco, NJ, UNITED STATES
DePuy Spine, Inc., Raynham, MA, UNITED STATES (U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|--|------|---------------|
| PATENT INFORMATION: | US 2004229878 | A1 | 20041118 |
| APPLICATION INFO.: | US 2003-631487 | A1 | 20030731 (10) |
| RELATED APPLN. INFO.: | Continuation-in-part of Ser. No. US 2003-610355, filed on 30 Jun 2003, PENDING Continuation-in-part of Ser. No. US 2003-456948, filed on 6 Jun 2003, PENDING | | |

| | NUMBER | DATE |
|-----------------------|--|---------------|
| PRIORITY INFORMATION: | US 2003-470098P | 20030513 (60) |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | APPLICATION | |
| LEGAL REPRESENTATIVE: | HAMILTON, BROOK, SMITH & REYNOLDS, P.C., 530 VIRGINIA ROAD, P.O. BOX 9133, CONCORD, MA, 01742-9133 | |
| NUMBER OF CLAIMS: | 75 | |
| EXEMPLARY CLAIM: | 1 | |
| LINE COUNT: | 1455 | |

L6 ANSWER 3 OF 38 USPATFULL on STN

TI Transdiscal administration of high affinity anti-MMP inhibitors
AB The present invention relates to injecting a high affinity antagonist of MMPs into a diseased intervertebral disc.

ACCESSION NUMBER: 2004:291773 USPATFULL
TITLE: Transdiscal administration of high affinity anti-MMP inhibitors
INVENTOR(S): Serhan, Hassan, South Easton, MA, UNITED STATES
DiMauro, Thomas M., Southboro, MA, UNITED STATES
Attawia, Mohamed, Canton, MA, UNITED STATES
Grace, Melissa, Raynham, MA, UNITED STATES
Kadiyala, Sudhakar, South Easton, MA, UNITED STATES
Urbahns, David, Barrington, RI, UNITED STATES
Bruder, Scott, Sudbury, MA, UNITED STATES
Collins, Gregory, East Sandwich, MA, UNITED STATES
PATENT ASSIGNEE(S): DePuy Spine, Inc., Raynham, MA (U.S. corporation)

| NUMBER | KIND | DATE |
|---|------|---------------|
| US 2004228853 | A1 | 20041118 |
| US 2003-610355 | A1 | 20030630 (10) |
| Continuation-in-part of Ser. No. US 2003-456948, filed on 6 Jun 2003, PENDING | | |

| NUMBER | DATE |
|--|---------------|
| US 2003-470098P | 20030513 (60) |
| Utility | |
| APPLICATION | |
| HAMILTON, BROOK, SMITH & REYNOLDS, P.C., 530 VIRGINIA ROAD, P.O. BOX 9133, CONCORD, MA, 01742-9133 | |
| NUMBER OF CLAIMS: | 58 |
| EXEMPLARY CLAIM: | 1 |
| LINE COUNT: | 941 |

L6 ANSWER 4 OF 38 USPATFULL on STN
TI Computer system and methods for producing morphogen analogs of human TDF-1
AB The invention disclosed herein provides methods and compositions for the computer-assisted design of morphogen analogs. Practice of the invention is enabled by the use of at least a portion of the atomic co-ordinates defining the three-dimensional structure of human transformation and differentiation factor-1 (hTDF-1) as a starting point in the design of the morphogen analogs. In addition, the invention provides methods for producing morphogen analogs of interest, and methods for testing whether the resulting analogs mimic or agonize human TDF-1-like biological activity. The invention also provides a family of morphogen analogs produced by such methods.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2004:121745 USPATFULL
TITLE: Computer system and methods for producing morphogen analogs of human TDF-1
INVENTOR(S): Carlson, William D., Weston, MA, UNITED STATES
Keck, Peter C., Millbury, MA, UNITED STATES

| NUMBER | KIND | DATE |
|---|------|---------------|
| US 2004093164 | A1 | 20040513 |
| US 2002-290554 | A1 | 20021108 (10) |
| Utility | | |
| APPLICATION | | |
| MINTZ, LEVIN, COHN, FERRIS, GLOVSKY, AND POPEO, P.C., ONE FINANCIAL CENTER, BOSTON, MA, 02111 | | |

NUMBER OF CLAIMS: 21
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 54 Drawing Page(s)
LINE COUNT: 2926
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 5 OF 38 USPATFULL on STN
TI Mutations of the C-terminal portion of TGF- β superfamily proteins
AB The invention provides modified proteins and DNAs of the TGF- β superfamily including modified morphogenic proteins. The proteins of the present invention display altered biological or biochemical attributes. Specifically, the modified proteins are designed through substitutions of amino acids in the finger 2 sub-domain or exchanges of all or part of the finger 2 sub-domain of one TGF- β superfamily member with the finger 2 sub-domain of another TGF- β superfamily member.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2004:9647 USPATFULL
TITLE: Mutations of the C-terminal portion of TGF- β superfamily proteins
INVENTOR(S): Oppermann, Hermann, Medway, MA, United States
Tai, Mei-Sheng, Shrewsbury, MA, United States
McCartney, John, Holliston, MA, United States
PATENT ASSIGNEE(S): Stryker Corporation, Kalamazoo, MI, United States (U.S. corporation)

| | NUMBER | KIND | DATE |
|---------------------|----------------|------|--------------|
| PATENT INFORMATION: | US 6677432 | B1 | 20040113 |
| APPLICATION INFO.: | US 1999-374958 | | 19990816 (9) |

| | NUMBER | DATE |
|-----------------------|--|---------------|
| PRIORITY INFORMATION: | US 1998-103418P | 19981007 (60) |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | GRANTED | |
| PRIMARY EXAMINER: | Spector, Lorraine | |
| ASSISTANT EXAMINER: | Seharaseyoon, Jegatheesan | |
| LEGAL REPRESENTATIVE: | Fish & Neave, Haley, Jr., James F., Mangasarian, Karen | |
| NUMBER OF CLAIMS: | 13 | |
| EXEMPLARY CLAIM: | 1 | |
| NUMBER OF DRAWINGS: | 8 Drawing Figure(s); 12 Drawing Page(s) | |
| LINE COUNT: | 4992 | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 6 OF 38 USPATFULL on STN
TI Morphogen analogs of bone morphogenic proteins
AB The present invention relates to morphogen analogs, particularly analogs of a BMP, such as OP-1, that are agonists or antagonists of a BMP, such as OP-1, biological activity.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2003:264778 USPATFULL
TITLE: Morphogen analogs of bone morphogenic proteins
INVENTOR(S): Keck, Peter C., Millbury, MA, UNITED STATES
Bosukonda, Dattatreymurty, Shrewsbury, MA, UNITED STATES
PATENT ASSIGNEE(S): Curis, Inc., Cambridge, MA (U.S. corporation)

| | NUMBER | KIND | DATE |
|---------------------|----------------|------|---------------|
| PATENT INFORMATION: | US 2003185792 | A1 | 20031002 |
| APPLICATION INFO.: | US 2002-164279 | A1 | 20020606 (10) |

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 2001-791946, filed on 22 Feb 2001, PENDING Continuation of Ser. No. US 1997-786284, filed on 22 Jan 1997, GRANTED, Pat. No. US 6273598 Continuation-in-part of Ser. No. US 1996-589552, filed on 22 Jan 1996, ABANDONED

| | NUMBER | DATE |
|--|---|---------------|
| PRIORITY INFORMATION: | US 2002-354820P | 20020205 (60) |
| | US 2002-371298P | 20020410 (60) |
| | US 2001-296291P | 20010606 (60) |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | APPLICATION | |
| LEGAL REPRESENTATIVE: | ROPES & GRAY, ONE INTERNATIONAL PLACE, BOSTON, MA, 02110-2624 | |
| NUMBER OF CLAIMS: | 52 | |
| EXEMPLARY CLAIM: | 1 | |
| NUMBER OF DRAWINGS: | 28 Drawing Page(s) | |
| LINE COUNT: | 4870 | |
| CAS INDEXING IS AVAILABLE FOR THIS PATENT. | | |

L6 ANSWER 7 OF 38 USPATFULL on STN
TI Single chain analogs of the TGF-beta superfamily (morphons)
AB Disclosed are a family of single-chain polypeptide constructs designed to agonize or mimic members of the TGF- β superfamily by binding to a cell surface receptor complementary to the superfamily member. The single-chain constructs of the invention called "morphons" contain in a single biologically active subunit interacting finger and heel regions which together define a tertiary protein structure complimentary to the ligand binding surface of a receptor that binds a TGF- β superfamily member. Also disclosed are truncated versions of the morphon constructs. Methods are disclosed for making and using single-chain morphons that have binding affinity for predetermined receptors of the TGF- β superfamily.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2003:251878 USPATFULL
TITLE: Single chain analogs of the TGF-beta superfamily (morphons)
INVENTOR(S): Keck, Peter C., Millbury, MA, UNITED STATES
Smart, John E., Weston, MA, UNITED STATES
PATENT ASSIGNEE(S): Stryker Corporation (U.S. corporation)

| | NUMBER | KIND | DATE |
|--|---|------|---------------|
| PATENT INFORMATION: | US 2003176667 | A1 | 20030918 |
| APPLICATION INFO.: | US 2002-187394 | A1 | 20020628 (10) |
| RELATED APPLN. INFO.: | Continuation of Ser. No. US 2000-496398, filed on 2 Feb 2000, GRANTED, Pat. No. US 6479643 Continuation of Ser. No. US 1995-478097, filed on 7 Jun 1995, GRANTED, Pat. No. US 6040431 | | |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | APPLICATION | | |
| LEGAL REPRESENTATIVE: | TESTA, HURWITZ & THIBEAULT, LLP, HIGH STREET TOWER, 125 HIGH STREET, BOSTON, MA, 02110 | | |
| NUMBER OF CLAIMS: | 26 | | |
| EXEMPLARY CLAIM: | 1 | | |
| NUMBER OF DRAWINGS: | 23 Drawing Page(s) | | |
| LINE COUNT: | 4012 | | |
| CAS INDEXING IS AVAILABLE FOR THIS PATENT. | | | |

L6 ANSWER 8 OF 38 USPATFULL on STN
TI Metal reinforced biodegradable intraluminal stents
AB The present invention provides an intraluminal stent comprising a

metallic reinforcing component and a biodegradable polymeric material covering at least a portion of the metallic reinforcing component. The metallic reinforcing component provides structural reinforcement for the stent, but this reinforcement is insufficient, in the absence of the biodegradable polymeric material, to provide a stent capable of maintaining patency of a lumen upon implantation of the stent into the lumen. One advantage of the present invention, among others, is that a stent is provided in which reduced amounts of metallic component remain after degradation of the biodegradable polymeric material covering, in turn reducing the incidence of metal-associated adverse events that frequently follow implantation.

ACCESSION NUMBER: 2003:220679 USPATFULL
 TITLE: Metal reinforced biodegradable intraluminal stents
 INVENTOR(S): Chandrasekaran, Chandru, Mercer Island, WA, UNITED STATES

| | NUMBER | KIND | DATE |
|-----------------------|--|------|---------------|
| PATENT INFORMATION: | US 2003153971 | A1 | 20030814 |
| APPLICATION INFO.: | US 2002-75914 | A1 | 20020214 (10) |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | APPLICATION | | |
| LEGAL REPRESENTATIVE: | MAYER, FORTKORT & WILLIAMS, PC, 251 NORTH AVENUE WEST, 2ND FLOOR, WESTFIELD, NJ, 07090 | | |
| NUMBER OF CLAIMS: | 27 | | |
| EXEMPLARY CLAIM: | 1 | | |
| NUMBER OF DRAWINGS: | 3 Drawing Page(s) | | |
| LINE COUNT: | 951 | | |

L6 ANSWER 9 OF 38 USPATFULL on STN
 TI Methods and compositions for the treatment and prevention of parkinson's disease
 AB Disclosed are therapeutic treatment methods, compositions and devices for maintaining neural pathways in a mammal, including enhancing survival of neurons at risk of dying, inducing cellular repair of damaged neurons and neural pathways, and stimulating neurons to maintain their differentiated phenotype. In one embodiment, the invention provides means for stimulating CAM expression in neurons. The invention also provides means for evaluating the status of nerve tissue, including means for detecting and monitoring neuropathies in a mammal. The methods, devices and compositions include a morphogen or morphogen-stimulating agent provided to the mammal in a therapeutically effective concentration.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
 ACCESSION NUMBER: 2003:159830 USPATFULL
 TITLE: Methods and compositions for the treatment and prevention of parkinson's disease
 INVENTOR(S): Rueger, David C., Southborough, MA, UNITED STATES
 Sampath, Kuber T., Holliston, MA, UNITED STATES
 Cohen, Charles M., Weston, MA, UNITED STATES
 Oppermann, Hermann, Medway, MA, UNITED STATES
 Pang, Roy H.L., Etna, NH, UNITED STATES

| | NUMBER | KIND | DATE |
|-----------------------|--|------|---------------|
| PATENT INFORMATION: | US 2003109445 | A1 | 20030612 |
| APPLICATION INFO.: | US 2002-272503 | A1 | 20021016 (10) |
| RELATED APPLN. INFO.: | Continuation of Ser. No. US 1997-938622, filed on 25 Sep 1997, GRANTED, Pat. No. US 6506729
Continuation-in-part of Ser. No. US 1994-260675, filed on 16 Jun 1994, PENDING Continuation of Ser. No. US 1993-126100, filed on 23 Sep 1993, ABANDONED | | |

Continuation of Ser. No. US 1992-922813, filed on 31 Jul 1992, ABANDONED Continuation-in-part of Ser. No. US 1991-752764, filed on 30 Aug 1991, ABANDONED Continuation-in-part of Ser. No. US 1991-753059, filed on 30 Aug 1991, ABANDONED Continuation-in-part of Ser. No. US 1991-667274, filed on 11 Mar 1991, ABANDONED

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: ROPES & GRAY, ONE INTERNATIONAL PLACE, BOSTON, MA, 02110-2624
NUMBER OF CLAIMS: 14
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 13 Drawing Page(s)
LINE COUNT: 3035
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 10 OF 38 USPATFULL on STN
TI Shaped particle comprised of bone material and method of making the particle
AB A shaped particle for use in an array of interlocking particles to repair, replace, improve or augment a bone deficiency is provided. The particle is comprised of bone material and, in a preferred embodiment, has six extremities, and the interstitial spaces between the extremities of one particle accept the extremities of an adjacent particle in an array. In a preferred embodiment, the bone material is demineralized bone material. In some embodiments, the particle is suspended in a material that facilitates application of the particle to bone, and the material may contain biological factors that augment bone growth or prevent infection.

ACCESSION NUMBER: 2003:79582 USPATFULL
TITLE: Shaped particle comprised of bone material and method of making the particle
INVENTOR(S): Schryver, Jeffrey E., Cordova, TN, UNITED STATES
Cooper, Michael B., Memphis, TN, UNITED STATES
Kinnane, Keith M., Bartlett, TN, UNITED STATES
Long, Marc, Memphis, TN, UNITED STATES
Allen, Trevor, York, UNITED KINGDOM
Margerrison, Ed, York, UNITED KINGDOM
Morgan, Robert, UNITED STATES
Bearcroft, Julie A., Bartlett, TN, UNITED STATES
Harrison, Andrew, York, UNITED KINGDOM
Kaiser, William B., Sunnyvale, CA, UNITED STATES

| NUMBER | KIND | DATE |
|--|------|---------------|
| US 2003055511 | A1 | 20030320 |
| US 2002-99616 | A1 | 20020315 (10) |
| Continuation-in-part of Ser. No. US 2000-517981, filed on 3 Mar 2000, PENDING Continuation-in-part of Ser. No. US 2001-792681, filed on 23 Feb 2001, PENDING | | |

PATENT INFORMATION:
APPLICATION INFO.:
RELATED APPLN. INFO.:
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Smith & Nephew, Inc., 1450 Brooks Road, Memphis, TN, 38116
NUMBER OF CLAIMS: 103
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 36 Drawing Page(s)
LINE COUNT: 3099

L6 ANSWER 11 OF 38 USPATFULL on STN
TI Cartilage repair and regeneration device and method
AB A method for the repair of a cartilagenous tissue defect, a cartilage repair device and a method of making a cartilage repair device are

disclosed. In the method for the repair of a cartilaginous tissue defect, a device comprising a scaffold, for example an extracellular matrix material, is implanted into the defect, and a biological lubricant is administered to the defect. The device comprises a scaffold, for example a naturally occurring extracellular matrix material, and a biological lubricant.

ACCESSION NUMBER: 2003:45709 USPATFULL
TITLE: Cartilage repair and regeneration device and method
INVENTOR(S): Plouhar, Pamela Lynn, South Bend, IN, UNITED STATES
Malaviya, Prasanna, Ft. Wayne, IN, UNITED STATES
Schwartz, Herbert Eugene, Ft. Wayne, IN, UNITED STATES

| | NUMBER | KIND | DATE |
|---------------------|----------------|------|---------------|
| PATENT INFORMATION: | US 2003033022 | A1 | 20030213 |
| APPLICATION INFO.: | US 2002-195606 | A1 | 20020715 (10) |

| | NUMBER | DATE |
|-----------------------|--|----------------|
| PRIORITY INFORMATION: | US 2002-388724P | 20020614 (60). |
| | US 2001-305786P | 20010716 (60) |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | APPLICATION | |
| LEGAL REPRESENTATIVE: | BARNES & THORNBURG, 11 SOUTH MERIDIAN, INDIANAPOLIS, IN, 46204 | |
| NUMBER OF CLAIMS: | 60 | |
| EXEMPLARY CLAIM: | 1 | |
| NUMBER OF DRAWINGS: | 5 Drawing Page(s) | |
| LINE COUNT: | 1074 | |

L6 ANSWER 12 OF 38 USPATFULL on STN
TI Methods for enhancing functional recovery following central nervous system ischemia or trauma
AB The present invention provides methods and compositions for treatment of mammals afflicted with an ischemic or traumatic injury of the central nervous system. The present invention capitalizes in part upon the discovery that administration of a morphogen to such a mammal provides significant improvement in central nervous system function, even when administered after central nervous system tissue has been damaged. The methods involve the administration of dimeric proteins defined as morphogens, inducers of these morphogens, or agonists of the corresponding morphogen receptors, or implantation of cells stimulated by exposure to the morphogens. The proteins defined as morphogens comprise a structurally and functionally distinct family within the TGF- β superfamily. Osteogenic protein-1 (OP-1) is considered to be an exemplary and preferred member of this morphogen family.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2003:30881 USPATFULL
TITLE: Methods for enhancing functional recovery following central nervous system ischemia or trauma
INVENTOR(S): Charette, Marc F., Needham, MA, UNITED STATES
Finklestein, Seth P., Needham, MA, UNITED STATES

| | NUMBER | KIND | DATE |
|-----------------------|---|------|---------------|
| PATENT INFORMATION: | US 2003022830 | A1 | 20030130 |
| APPLICATION INFO.: | US 2002-62370 | A1 | 20020201 (10) |
| RELATED APPLN. INFO.: | Continuation of Ser. No. US 1997-828281, filed on 21 Mar 1997, PENDING Continuation-in-part of Ser. No. US 1996-620444, filed on 22 Mar 1996, ABANDONED | | |
| DOCUMENT TYPE: | Utility | | |

FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: ROPES & GRAY, ONE INTERNATIONAL PLACE, BOSTON, MA,
02110-2624
NUMBER OF CLAIMS: 26
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 14 Drawing Page(s)
LINE COUNT: 2127
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 13 OF 38 USPATFULL on STN
TI Methods and compositions for the treatment and prevention of Parkinson's disease
AB Disclosed are therapeutic treatment methods, compositions and devices for maintaining neural pathways in a mammal, including enhancing survival of neurons at risk of dying, inducing cellular repair of damaged neurons and neural pathways, and stimulating neurons to maintain their differentiated phenotype. In one embodiment, the invention provides means for stimulating CAM expression in neurons. The invention also provides means for evaluating the status of nerve tissue, including means for detecting and monitoring neuropathies in a mammal. The methods, devices and compositions include a morphogen or morphogen-stimulating agent provided to the mammal in a therapeutically effective concentration.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:13291 USPATFULL
TITLE: Methods and compositions for the treatment and prevention of Parkinson's disease
INVENTOR(S): Rueger, David C., Southborough, MA, United States
Sampath, Kuber T., Holliston, MA, United States
Cohen, Charles M., Weston, MA, United States
Oppermann, Hermann, Medway, MA, United States
Pang, Roy H. L., Etna, NH, United States
Curis, Inc., Cambridge, MA, United States (U.S. corporation)

| PATENT INFORMATION: | NUMBER | KIND | DATE |
|-----------------------|---|------|--------------|
| APPLICATION INFO.: | US 6506729 | B1 | 20030114 |
| RELATED APPLN. INFO.: | US 1997-938622 | | 19970925 (8) |
| | Continuation-in-part of Ser. No. US 1994-260675, filed on 16 Jun 1994 Continuation of Ser. No. US 1993-126100, filed on 23 Sep 1993, now abandoned Continuation of Ser. No. US 1992-922813, filed on 31 Jul 1992, now abandoned Continuation-in-part of Ser. No. US 1991-752764, filed on 30 Aug 1991, now abandoned Continuation-in-part of Ser. No. US 1991-753059, filed on 30 Aug 1991, now abandoned Continuation-in-part of Ser. No. US 1991-667274, filed on 8 Mar 1991, now abandoned | | |

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Kunz, Gary L.
ASSISTANT EXAMINER: Gucker, Stephen
LEGAL REPRESENTATIVE: Ropes & Gray
NUMBER OF CLAIMS: 6
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 16 Drawing Figure(s); 13 Drawing Page(s)
LINE COUNT: 2995
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 14 OF 38 USPATFULL on STN
TI Morphogen treatment for chronic renal failure
AB The present invention provides methods for the treatment, and

pharmaceuticals for use in the treatment, of mammalian subjects at risk chronic renal failure, or at risk of a need for renal replacement therapy. The methods involve the administration of certain morphogens, inducers of those morphogens, or agonists of the corresponding morphogen receptors, or implantation of renal cells induced with those morphogens. The morphogens useful in the invention include osteogenic protein-1 (OP-1) and other members of the OP-1 subfamily of the TGF- β superfamily of growth factors.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2002:340311 USPATFULL
TITLE: Morphogen treatment for chronic renal failure
INVENTOR(S): Sampath, Kuber T., Holliston, MA, United States
Cohen, Charles M., Weston, MA, United States
PATENT ASSIGNEE(S): Curis, Inc., Cambridge, MA, United States (U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|---|------|--------------|
| PATENT INFORMATION: | US 6498142 | B1 | 20021224 |
| APPLICATION INFO.: | US 1996-643321 | | 19960506 (8) |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | GRANTED | | |
| PRIMARY EXAMINER: | Celsa, Bennett | | |
| LEGAL REPRESENTATIVE: | Ropes & Gray, Vincent, Matthew P., Schneider, Spencer | | |
| NUMBER OF CLAIMS: | 24 | | |
| EXEMPLARY CLAIM: | 1 | | |
| NUMBER OF DRAWINGS: | 10 Drawing Figure(s); 18 Drawing Page(s) | | |
| LINE COUNT: | 3342 | | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 15 OF 38 USPATFULL on STN
TI Single chain analogs of the TGF- β superfamily (morphons)
AB Disclosed are a family of single-chain polypeptide constructs designed to agonize or mimic members of the TGF- β superfamily by binding to a cell surface receptor complementary to the superfamily member. The single-chain constructs of the invention called "morphons" contain in a single biologically active subunit interacting finger and heel regions which together define a tertiary protein structure complimentary to the ligand binding surface of a receptor that binds a TGF- β superfamily member. Also disclosed are truncated versions of the morphon constructs. Methods are disclosed for making and using single-chain morphons that have binding affinity for predetermined receptors of the TGF- β superfamily.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2002:297691 USPATFULL
TITLE: Single chain analogs of the TGF- β superfamily (morphons)
INVENTOR(S): Keck, Peter C., Millbury, MA, United States
Smart, John E., Weston, MA, United States
PATENT ASSIGNEE(S): Stryker Corporation, Kalamazoo, MI, United States (U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|--|------|--------------|
| PATENT INFORMATION: | US 6479643 | B1 | 20021112 |
| APPLICATION INFO.: | US 2000-496398 | | 20000202 (9) |
| RELATED APPLN. INFO.: | Continuation of Ser. No. US 1995-478097, filed on 7 Jun 1995, now patented, Pat. No. US 6040431, issued on 21 Sep 2000 | | |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | GRANTED | | |
| PRIMARY EXAMINER: | Allen, Marianne P. | | |

LEGAL REPRESENTATIVE: Testa, Hurwitz & Thibeault, LLP
NUMBER OF CLAIMS: 14
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 41 Drawing Figure(s); 23 Drawing Page(s)
LINE COUNT: 3930
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 16 OF 38 USPATFULL on STN
TI Terminally sterilized osteogenic devices and preparation thereof
AB Disclosed are terminally sterilized osteogenic devices for implantation into a mammal. The devices contain a combination of a biologically active osteogenic protein and an insoluble **carrier** which after being combined are sterilized by exposure to ionizing radiation, for example, by exposure to gamma rays or an electron beam. The terminally sterilized devices of the invention are characterized in that they induce bone formation following implantation into a mammal. Also disclosed is a method for inducing bone formation in a mammal by implanting a terminally sterilized device of the invention into a preselected locus in a mammal. Also disclosed is a method for preparing the terminally sterilized device of the invention.

ACCESSION NUMBER: 2002:262069 USPATFULL
TITLE: Terminally sterilized osteogenic devices and preparation thereof
INVENTOR(S): Tucker, Marjorie M., Holliston, MA, United States
Rueger, David C., Southborough, MA, United States
Sampath, Kuber T., Holliston, MA, United States
PATENT ASSIGNEE(S): Stryker Corporation, Kalamazoo, MI, United States (U.S. corporation)

| NUMBER | KIND | DATE |
|--|------|--------------|
| US 6461630 | B1 | 20021008 |
| US 1999-450541 | | 19991130 (9) |
| Continuation of Ser. No. US 1998-159535, filed on 23 Sep 1998, now patented, Pat. No. US 6013856 | | |
| Continuation of Ser. No. US 1997-881307, filed on 24 Jun 1997, now patented, Pat. No. US 6028242 Division of Ser. No. US 1995-478452, filed on 7 Jun 1995, now patented, Pat. No. US 5674292 | | |

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Fredman, Jeffrey
ASSISTANT EXAMINER: Chakrabarti, Arun K.
LEGAL REPRESENTATIVE: Testa, Hurwitz & Thibeault, LLP
NUMBER OF CLAIMS: 18
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 1 Drawing Figure(s); 1 Drawing Page(s)
LINE COUNT: 1439

L6 ANSWER 17 OF 38 USPATFULL on STN
TI Terminally sterilized osteogenic devices and preparation thereof
AB Disclosed are terminally sterilized osteogenic devices for implantation into a mammal. The devices contain a combination of a biologically active osteogenic protein and an insoluble **carrier** which after being combined are sterilized by exposure to ionizing radiation, for example, by exposure to gamma rays or an electron beam. The terminally sterilized devices of the invention are characterized in that they induce bone formation following implantation into a mammal. Also disclosed is a method for inducing bone formation in a mammal by implanting a terminally sterilized device of the invention into a preselected locus in a mammal. Also disclosed is a method for preparing the terminally sterilized device of the invention.

ACCESSION NUMBER: 2002:198300 USPATFULL
 TITLE: Terminally sterilized osteogenic devices and preparation thereof
 INVENTOR(S) : Tucker, Marjorie M., Holliston, MA, UNITED STATES
 Rueger, David C., Southborough, MA, UNITED STATES
 Sampath, Kuber T., Holliston, MA, UNITED STATES

| | NUMBER | KIND | DATE |
|-----------------------|---|------|--------------|
| PATENT INFORMATION: | US 2002106394 | A1 | 20020808 |
| | US 6504079 | B2 | 20030107 |
| APPLICATION INFO.: | US 2001-954748 | A1 | 20010918 (9) |
| RELATED APPLN. INFO.: | Continuation of Ser. No. US 1999-450541, filed on 30 Nov 1999, PENDING Continuation of Ser. No. US 1998-159535, filed on 23 Sep 1998, GRANTED, Pat. No. US 6013856 Continuation of Ser. No. US 1997-881307, filed on 24 Jun 1997, GRANTED, Pat. No. US 6028242 Division of Ser. No. US 1995-478452, filed on 7 Jun 1995, GRANTED, Pat. No. US 5674292 | | |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | APPLICATION | | |
| LEGAL REPRESENTATIVE: | TESTA, HURWITZ & THIBEAULT, LLP, HIGH STREET TOWER, 125 HIGH STREET, BOSTON, MA, 02110 | | |
| NUMBER OF CLAIMS: | 21 | | |
| EXEMPLARY CLAIM: | 1 | | |
| NUMBER OF DRAWINGS: | 1 Drawing Page(s) | | |
| LINE COUNT: | 1342 | | |

L6 ANSWER 18 OF 38 USPATFULL on STN
 TI Method for enhancing functional recovery following central nervous system ischemia or trauma
 AB The present invention provides methods and compositions for treatment of mammals afflicted with an ischemic or traumatic injury of the central nervous system. The present invention capitalizes in part upon the discovery that administration of a morphogen to such a mammal provides significant improvement in central nervous system function, even when administered after central nervous system tissue has been damaged. The methods involve the administration of dimeric proteins defined as morphogens, inducers of these morphogens, or agonists of the corresponding morphogen receptors, or implantation of cells stimulated by exposure to the morphogens. The proteins defined as morphogens comprise a structurally and functionally distinct family within the TGF- β superfamily. Osteogenic protein-1 (OP-1) is considered to be an exemplary and preferred member of this morphogen family.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2002:144236 USPATFULL
 TITLE: Method for enhancing functional recovery following central nervous system ischemia or trauma
 INVENTOR(S) : Charette, Marc F., Needham, MA, United States
 Finklestein, Seth P., Needham, MA, United States
 PATENT ASSIGNEE(S) : Curis, Inc., Cambridge, MA, United States (U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|--|------|--------------|
| PATENT INFORMATION: | US 6407060 | B1 | 20020618 |
| APPLICATION INFO.: | US 1997-828281 | | 19970321 (8) |
| RELATED APPLN. INFO.: | Continuation-in-part of Ser. No. US 1996-620444, filed on 22 Mar 1996, now abandoned | | |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | GRANTED | | |
| PRIMARY EXAMINER: | Henley, III, Raymond | | |

ASSISTANT EXAMINER: Delacroix-Muirheid, C.
LEGAL REPRESENTATIVE: Ropes & Gray
NUMBER OF CLAIMS: 30
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 14 Drawing Figure(s); 14 Drawing Page(s)
LINE COUNT: 2459
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 19 OF 38 USPATFULL on STN
TI Soluble morphogenic protein complex compositions of matter
AB Disclosed are novel compositions of morphogenic proteins constituting soluble forms of these proteins, antibodies that distinguish between soluble and mature forms, and method for producing these morphogenic proteins and antibodies.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2002:122758 USPATFULL
TITLE: Soluble morphogenic protein complex compositions of matter
INVENTOR(S): Jones, William K., Brookline, MA, United States
Tucker, Ronald F., Holliston, MA, United States
Rueger, David C., Hopkinton, MA, United States
Oppermann, Hermann, Medway, MA, United States
Ozkaynak, Engin, Milford, MA, United States
Kuberasampath, Thangavel, Medway, MA, United States
Curis, Inc., Cambridge, MA, United States (U.S. corporation)
PATENT ASSIGNEE(S):

| | NUMBER | KIND | DATE |
|-----------------------|--|------|--------------|
| PATENT INFORMATION: | US 6395883 | B1 | 20020528 |
| APPLICATION INFO.: | US 1995-402542 | | 19950313 (8) |
| RELATED APPLN. INFO.: | Continuation of Ser. No. US 1993-40510, filed on 31 Mar 1993, now abandoned Continuation-in-part of Ser. No. US 1993-29335, filed on 4 Mar 1993, now abandoned Continuation-in-part of Ser. No. US 1992-971091, filed on 3 Nov 1992, now abandoned Continuation-in-part of Ser. No. US 1992-946235, filed on 16 Sep 1992, now abandoned Continuation-in-part of Ser. No. US 1992-938336, filed on 28 Aug 1992, now abandoned Continuation-in-part of Ser. No. US 1992-923780, filed on 31 Jul 1992, now abandoned Continuation-in-part of Ser. No. US 1991-752857, filed on 30 Aug 1991, now abandoned Continuation-in-part of Ser. No. US 1991-752764, filed on 30 Aug 1991, now abandoned Continuation-in-part of Ser. No. US 1991-667274, filed on 11 Mar 1991, now abandoned | | |

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Kemmerer, Elizabeth
LEGAL REPRESENTATIVE: Testa Hurwitz & Thibeault
NUMBER OF CLAIMS: 15
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 3 Drawing Figure(s); 2 Drawing Page(s)
LINE COUNT: 1552
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 20 OF 38 USPATFULL on STN
TI METHODS AND COMPOSITIONS FOR THE TREATMENT OF MOTOR NEURON INJURY AND NEUROPATHY
AB Disclosed are therapeutic treatment methods, compositions and devices for maintaining neural pathways in a mammal, including enhancing survival of neurons at risk of dying, inducing cellular repair of damaged neurons and neural pathways, and stimulating neurons to maintain

their differentiated phenotype. In one embodiment, the invention provides means for stimulating CAM expression in neurons. The invention also provides means for evaluating the status of nerve tissue, including means for detecting and monitoring neuropathies in a mammal. The methods, devices and compositions include a morphogen or morphogen-stimulating agent provided to the mammal in a therapeutically effective concentration.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2002:92635 USPATFULL

TITLE: METHODS AND COMPOSITIONS FOR THE TREATMENT OF MOTOR NEURON INJURY AND NEUROPATHY

INVENTOR(S): RUEGER, DAVID C., SOUTHBOROUGH, MA, UNITED STATES
SAMPATH, KUBER T., HOLLISTON, MA, UNITED STATES
OPPERMANN, HERMAN, MEDWAY, MA, UNITED STATES
PANG, ROY H. L., NEW HAMPSHIRE, MA, UNITED STATES
COHEN, CHARLES M., WESTON, MA, UNITED STATES

| | NUMBER | KIND | DATE |
|-----------------------|---|------|--------------|
| PATENT INFORMATION: | US 2002049159 | A1 | 20020425 |
| | US 6723698 | B2 | 20040420 |
| APPLICATION INFO.: | US 1997-937755 | A1 | 19970925 (8) |
| RELATED APPLN. INFO.: | Continuation-in-part of Ser. No. US 1994-260675, filed on 16 Jun 1994, PENDING Continuation of Ser. No. US 1993-126100, filed on 23 Sep 1993, ABANDONED
Continuation of Ser. No. US 1992-922813, filed on 31 Jul 1992, ABANDONED Continuation-in-part of Ser. No. US 1991-752764, filed on 30 Aug 1991, ABANDONED
Continuation-in-part of Ser. No. US 1991-753059, filed on 30 Aug 1991, ABANDONED Continuation-in-part of Ser. No. US 1991-667274, filed on 11 Mar 1991, ABANDONED | | |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | APPLICATION | | |
| LEGAL REPRESENTATIVE: | IVOR R ELRIFI, MINTZ LEVIN, ONE FINANCIAL CENTER, BOSTON, MA, 02111 | | |
| NUMBER OF CLAIMS: | 23 | | |
| EXEMPLARY CLAIM: | 1 | | |
| NUMBER OF DRAWINGS: | 17 Drawing Page(s) | | |
| LINE COUNT: | 3688 | | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 21 OF 38 USPATFULL on STN

TI Methods and compositions for producing morphogen analogs

AB The invention disclosed herein provides methods and compositions for the computer-assisted design of morphogen analogs. Practice of the invention is enabled by the use of at least a portion of the atomic co-ordinates defining the three-dimensional structure of human osteogenic protein-1 (hOP-1) as a starting point in the design of the morphogen analogs. In addition, the invention provides methods for producing morphogen analogs of interest, and methods for testing whether the resulting analogs mimic or agonize human OP-1-like biological activity. The invention also provides a family of morphogen analogs produced by such methods.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2002:48262 USPATFULL

TITLE: Methods and compositions for producing morphogen analogs

INVENTOR(S): Keck, Peter C., Millbury, MA, UNITED STATES
Griffith, Diana L., Weston, MA, UNITED STATES
Carlson, William D., Weston, MA, UNITED STATES
Rueger, David C., Hopkinton, MA, UNITED STATES
Sampath, Kuber T., Medway, MA, UNITED STATES

| | NUMBER | KIND | DATE |
|--|---|------|--------------|
| PATENT INFORMATION: | US 2002028453 | A1 | 20020307 |
| APPLICATION INFO.: | US 2001-791946 | A1 | 20010222 (9) |
| RELATED APPLN. INFO.: | Continuation of Ser. No. US 1997-786284, filed on 22 Jan 1997, GRANTED, Pat. No. US 6273598 | | |
| | Continuation-in-part of Ser. No. US 1996-589552, filed on 22 Jan 1996, ABANDONED | | |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | APPLICATION | | |
| LEGAL REPRESENTATIVE: | c/o MINTZ, LEVIN, One Financial Center, Boston, MA, 02111 | | |
| NUMBER OF CLAIMS: | 23 | | |
| EXEMPLARY CLAIM: | 1 | | |
| NUMBER OF DRAWINGS: | 98 Drawing Page(s) | | |
| LINE COUNT: | 2974 | | |
| CAS INDEXING IS AVAILABLE FOR THIS PATENT. | | | |

L6 ANSWER 22 OF 38 USPATFULL on STN
 TI Treatment to prevent loss of and/or increase bone mass in metabolic bone diseases
 AB The invention is a treatment for increasing the bone mass or preventing bone loss in an individual afflicted with a bone disease which includes administering to the individual a morphogen in a therapeutically effective amount so as to maintain or stimulate bone formation.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2001:235237 USPATFULL
 TITLE: Treatment to prevent loss of and/or increase bone mass in metabolic bone diseases
 INVENTOR(S): Kuberampath, Thangavel, Medway, MA, United States
 Cohen, Charles M., Weston, MA, United States
 Oppermann, Herrmann, Medway, MA, United States
 Ozkaynak, Engin, Milford, MA, United States
 Rueger, David C., Hopkinton, MA, United States
 Smart, John E., Weston, MA, United States
 Pang, Roy H. L., Etna, NH, United States
 Curis, Inc., United States (U.S. corporation)
 PATENT ASSIGNEE(S):

| | NUMBER | KIND | DATE |
|-----------------------|---|------|--------------|
| PATENT INFORMATION: | US 6333312 | B1 | 20011225 |
| APPLICATION INFO.: | US 1998-170936 | | 19981013 (9) |
| RELATED APPLN. INFO.: | Continuation of Ser. No. US 1995-432883, filed on 2 May 1995, now abandoned Continuation of Ser. No. US 1993-115914, filed on 1 Sep 1993, now abandoned Continuation of Ser. No. US 1992-923780, filed on 31 Jul 1992, now abandoned Continuation-in-part of Ser. No. US 1991-752764, filed on 30 Aug 1991, now abandoned Continuation-in-part of Ser. No. US 1991-752857, filed on 30 Aug 1991, now abandoned Continuation-in-part of Ser. No. US 1991-667274, filed on 11 Mar 1991, now abandoned | | |

DOCUMENT TYPE: Utility
 FILE SEGMENT: GRANTED
 PRIMARY EXAMINER: Kemmerer, Elizabeth
 LEGAL REPRESENTATIVE: Walker, Shelby J., Morency, MichaelMintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.
 NUMBER OF CLAIMS: 14
 EXEMPLARY CLAIM: 1
 NUMBER OF DRAWINGS: 16 Drawing Figure(s); 12 Drawing Page(s)
 LINE COUNT: 2203
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 23 OF 38 USPATFULL on STN

TI Repair of larynx, trachea, and other fibrocartilaginous tissues
AB Provided herein are methods and devices for inducing the formation of functional replacement nonarticular cartilage tissues and ligament tissues. These methods and devices involve the use of osteogenic proteins, and are useful in repairing defects in the larynx, trachea, interarticular menisci, intervertebral discs, ear, nose, ribs and other fibrocartilaginous tissues in a mammal.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2001:165613 USPATFULL

TITLE: Repair of larynx, trachea, and other fibrocartilaginous tissues

INVENTOR(S): Vukicevic, Slobodan, Zagreb, Croatia
Katic, Vladimir, Zagreb, Croatia

PATENT ASSIGNEE(S): Sampath, Kuber T., Holliston, MA, United States
Creative BioMolecules, Inc. (non-U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 2001024823 A1 20010927

APPLICATION INFO.: US 2001-828607 A1 20010406 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. WO 1999-US17222, filed on 30 Jul 1999, UNKNOWN

NUMBER DATE

PRIORITY INFORMATION: US 1998-103161P 19981006 (60)

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: FISH & NEAVE, 1251 AVENUE OF THE AMERICAS, 50TH FLOOR, NEW YORK, NY, 10020-1105

NUMBER OF CLAIMS: 56

EXEMPLARY CLAIM: 1

LINE COUNT: 1859

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 24 OF 38 USPATFULL on STN

TI Computer system and methods for producing morphogen analogs of human OP-1

AB The invention disclosed herein provides methods and compositions for the computer-assisted design of morphogen analogs. Practice of the invention is enabled by the use of at least a portion of the atomic co-ordinates defining the three-dimensional structure of human osteogenic protein-1 (hOP-1) as a starting point in the design of the morphogen analogs. In addition, the invention provides methods for producing morphogen analogs of interest, and methods for testing whether the resulting analogs mimic or agonize human OP-1-like biological activity. The invention also provides a family of morphogen analogs produced by such methods.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2001:130327 USPATFULL

TITLE: Computer system and methods for producing morphogen analogs of human OP-1

INVENTOR(S): Keck, Peter C., Millbury, MA, United States

Griffith, Diana L., Weston, MA, United States

Carlson, William D., Weston, MA, United States

Rueger, David C., Hopkinton, MA, United States

Sampath, Kuber T., Medway, MA, United States

PATENT ASSIGNEE(S): Creative BioMolecules, Inc., Boston, MA, United States (U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 6273598 B1 20010814
APPLICATION INFO.: US 1997-786284 19970122 (8)
RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1996-589552, filed
on 22 Jan 1996, now abandoned

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Horlick, Kenneth R.
ASSISTANT EXAMINER: Siew, Jeffrey
LEGAL REPRESENTATIVE: Elrifi, Ivor R., Morency, MichelMintz, Levin, Cohn,
Ferris, Glovsky & Popeo, PC

NUMBER OF CLAIMS: 21
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 108 Drawing Figure(s); 98 Drawing Page(s)
LINE COUNT: 2947
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 25 OF 38 USPATFULL on STN
TI 60A protein-induced morphogenesis
AB Disclosed are methods of utilizing a morphogenically active fragment of
60A protein to induce tissue morphogenesis, including methods for
increasing a progenitor cell population in a mammal, methods for
stimulating progenitor cells to differentiate and maintain their
differentiated phenotype in vivo or in vitro, methods for inducing
tissue-specific growth in vivo and methods for the replacement of
diseased or damaged tissue in vivo.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2001:48020 USPATFULL
TITLE: 60A protein-induced morphogenesis
INVENTOR(S): Kuberanpath, Thangavel, Medway, MA, United States
Pang, Roy H. L., Etna, NH, United States
Oppermann, Hermann, Medway, MA, United States
Rueger, David C., Hopkinton, MA, United States
Cohen, Charles M., Medway, MA, United States
Curis, Inc., United States (U.S. corporation)

| PATENT INFORMATION: | NUMBER | KIND | DATE |
|-----------------------|---|------|--------------|
| APPLICATION INFO.: | US 6211146 | B1 | 20010403 |
| RELATED APPLN. INFO.: | US 1994-271556 | | 19940707 (8) |
| | Continuation of Ser. No. US 1992-945292, filed on 15
Sep 1992, now abandoned Continuation-in-part of Ser.
No. US 1992-922813, filed on 31 Jul 1992, now abandoned
Continuation-in-part of Ser. No. US 1991-752764, filed
on 30 Aug 1991, now abandoned Continuation-in-part of
Ser. No. US 1991-667274, filed on 11 Mar 1991, now
abandoned Continuation-in-part of Ser. No. US
1992-923780, filed on 31 Jul 1992, now abandoned
Continuation-in-part of Ser. No. US 1991-752764, filed
on 30 Aug 1991, now abandoned Continuation-in-part of
Ser. No. US 1991-752857, filed on 30 Aug 1991, now
abandoned Continuation-in-part of Ser. No. US
1991-667274, filed on 11 Mar 1991, now abandoned
Continuation-in-part of Ser. No. US 1991-753059, filed
on 30 Aug 1991, now abandoned Continuation-in-part of
Ser. No. US 1991-667274, filed on 11 Mar 1991, now
abandoned | | |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | Granted | | |
| PRIMARY EXAMINER: | Kemmerer, Elizabeth | | |
| LEGAL REPRESENTATIVE: | Mintz, Levin, Cohn, Ferris, Glovsky & Popeo, P.C.,
Elrifi, Ivor R., Morency, Michel | | |
| NUMBER OF CLAIMS: | 8 | | |
| EXEMPLARY CLAIM: | 1 | | |

LINE COUNT: 2294
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 26 OF 38 USPATFULL on STN
TI Chitin hydrogels, methods of their production and use
AB This invention is directed to the preparation and utilization of supplemented chitin hydrogels, such as chitosan hydrogels. Further provided are biomaterials comprising same. The particular supplement delivered by the chitin hydrogel is selected as a function of its intended use. In one embodiment, this invention provides a composition of matter, comprising a chitin hydrogel or chitin-derived hydrogel, wherein the hydrogel does not inhibit full-thickness skin wound healing.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2000-128306 USPATFULL
TITLE: Chitin hydrogels, methods of their production and use
INVENTOR(S): Drohan, William N., Springfield, VA, United States
MacPhee, Martin J., Gaithersburg, MD, United States
Miekka, Shirley I., Gaithersburg, MD, United States
Singh, Manish S., Columbia, MD, United States
Elson, Clive, Halifax, Canada
Taylor, Jr., John R., New York, NY, United States
PATENT ASSIGNEE(S): Chitogenics, Inc., Morristown, NJ, United States (U.S. corporation)
The American National Red Cross, Washington, DC, United States (U.S. corporation)
Coalition for Hemophilia B, New York, NY, United States (U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|---|------|--------------|
| PATENT INFORMATION: | US 6124273 | | 20000926 |
| APPLICATION INFO.: | US 1997-960555 | | 19971013 (8) |
| RELATED APPLN. INFO.: | Continuation of Ser. No. US 1996-659999, filed on 7 Jun 1996, now abandoned | | |

| | NUMBER | DATE |
|-----------------------|--|---------------|
| PRIORITY INFORMATION: | US 1995-109P | 19950609 (60) |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | Granted | |
| PRIMARY EXAMINER: | Fonda, Kathleen K. | |
| LEGAL REPRESENTATIVE: | Lahive & Cockfield, LLP | |
| NUMBER OF CLAIMS: | 32 | |
| EXEMPLARY CLAIM: | 1 | |
| NUMBER OF DRAWINGS: | 6 Drawing Figure(s); 3 Drawing Page(s) | |
| LINE COUNT: | 2441 | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 27 OF 38 USPATFULL on STN
TI Single chain analogs of the TGF- β superfamily (morphons)
AB Disclosed are a family of single-chain polypeptide constructs designed to agonize or mimic members of the TGF- β superfamily by binding to a cell surface receptor complementary to the superfamily member. The single-chain constructs of the invention called "morphons" contain in a single biologically active subunit interacting finger and heel regions which together define a tertiary protein structure complimentary to the ligand binding surface of a receptor that binds a TGF- β superfamily member. Also disclosed are truncated versions of the morphon constructs. Methods are disclosed for making and using single-chain morphons that have binding affinity for predetermined receptors of the TGF- β superfamily.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2000:34675 USPATFULL
 TITLE: Single chain analogs of the TGF- β superfamily
 (morphons)
 INVENTOR(S): Keck, Peter C., Millbury, MA, United States
 Smart, John E., Weston, MA, United States
 PATENT ASSIGNEE(S): Stryker Corporation, Kalamazoo, MI, United States (U.S.
 corporation)

| | NUMBER | KIND | DATE |
|-----------------------|--|------|--------------|
| PATENT INFORMATION: | US 6040431 | | 20000321 |
| APPLICATION INFO.: | US 1995-478097 | | 19950607 (8) |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | Granted | | |
| PRIMARY EXAMINER: | Allen, Marianne P. | | |
| LEGAL REPRESENTATIVE: | Testa, Hurwitz & Thibeault, LLP | | |
| NUMBER OF CLAIMS: | 9 | | |
| EXEMPLARY CLAIM: | 1 | | |
| NUMBER OF DRAWINGS: | 39 Drawing Figure(s); 23 Drawing Page(s) | | |
| LINE COUNT: | 3912 | | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 28 OF 38 USPATFULL on STN

TI Terminally sterilized osteogenic devices and preparation thereof
 AB Disclosed are terminally sterilized osteogenic devices for implantation
 into a mammal. The devices contain a combination of a biologically
 active osteogenic protein and an insoluble carrier which after
 being combined are sterilized by exposure to ionizing radiation, for
 example, by exposure to gamma rays or an electron beam. The terminally
 sterilized devices of the invention are characterized in that they
 induce bone formation following implantation into a mammal. Also
 disclosed is a method for inducing bone formation in a mammal by
 implanting a terminally sterilized device of the invention into a
 preselected locus in a mammal. Also disclosed is a method for preparing
 the terminally sterilized device of the invention.

ACCESSION NUMBER: 2000:21736 USPATFULL
 TITLE: Terminally sterilized osteogenic devices and
 preparation thereof
 INVENTOR(S): Tucker, Marjorie M., Holliston, MA, United States
 Rueger, David C., Southborough, MA, United States
 Sampath, Kuber T., Holliston, MA, United States
 PATENT ASSIGNEE(S): Stryker Corporation, Kalamazoo, MI, United States (U.S.
 corporation)

| | NUMBER | KIND | DATE |
|-----------------------|--|------|--------------|
| PATENT INFORMATION: | US 6028242 | | 20000222 |
| APPLICATION INFO.: | US 1997-881307 | | 19970624 (8) |
| RELATED APPLN. INFO.: | Division of Ser. No. US 1995-478452, filed on 7 Jun
1995, now patented, Pat. No. US 5674292 | | |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | Granted | | |
| PRIMARY EXAMINER: | Isabella, David J. | | |
| ASSISTANT EXAMINER: | Black, John M. | | |
| LEGAL REPRESENTATIVE: | Testa, Hurwitz & Thibeault, LLP | | |
| NUMBER OF CLAIMS: | 24 | | |
| EXEMPLARY CLAIM: | 1 | | |
| NUMBER OF DRAWINGS: | 1 Drawing Figure(s); 1 Drawing Page(s) | | |
| LINE COUNT: | 1416 | | |

L6 ANSWER 29 OF 38 USPATFULL on STN

TI Terminally sterilized osteogenic devices and preparation thereof
 AB Disclosed are terminally sterilized osteogenic devices for implantation

into a mammal. The devices contain a combination of a biologically active osteogenic protein and an insoluble carrier which after being combined are sterilized by exposure to ionizing radiation, for example, by exposure to gamma rays or an electron beam. The terminally sterilized devices of the invention are characterized in that they induce bone formation following implantation into a mammal. Also disclosed is a method for inducing bone formation in a mammal by implanting a terminally sterilized device of the invention into a preselected locus in a mammal. Also disclosed is a method for preparing the terminally sterilized device of the invention.

ACCESSION NUMBER: 2000:5017 USPATFULL
 TITLE: Terminally sterilized osteogenic devices and preparation thereof
 INVENTOR(S): Tucker, Marjorie M., Holliston, MA, United States
 Rueger, David C., Southborough, MA, United States
 Sampath, Kuber T., Holliston, MA, United States
 PATENT ASSIGNEE(S): Stryker Corporation, Hopkinton, MA, United States (U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|--|--------------|------|
| PATENT INFORMATION: | US 6013856 | 20000111 | |
| APPLICATION INFO.: | US 1998-159535 | 19980923 (9) | |
| RELATED APPLN. INFO.: | Continuation of Ser. No. US 1997-881307, filed on 24 Jun 1997 which is a division of Ser. No. US 1995-478452, filed on 7 Jun 1995, now patented, Pat. No. US 5674292 | | |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | Granted | | |
| PRIMARY EXAMINER: | Smith, Jeffrey A. | | |
| ASSISTANT EXAMINER: | Robert, Eduardo C. | | |
| LEGAL REPRESENTATIVE: | Testa, Hurwitz & Thibeault LLP | | |
| NUMBER OF CLAIMS: | 34 | | |
| EXEMPLARY CLAIM: | 1 | | |
| NUMBER OF DRAWINGS: | 1 Drawing Figure(s); 1 Drawing Page(s) | | |
| LINE COUNT: | 1444 | | |

L6 ANSWER 30 OF 38 USPATFULL on STN
 TI Methods and compositions for multiple gene transfer into bone cells
 AB Disclosed are methods, compositions, kits and devices for use in transferring nucleic acids into bone cells in situ and/or for stimulating bone progenitor cells. Type II collagen and, particularly, osteotropic genes, are shown to stimulate bone progenitor cells and to promote bone growth, repair and regeneration in vivo. Gene transfer protocols are disclosed for use in transferring various nucleic acid materials into bone, as may be used in treating various bone-related diseases and defects including fractures, osteoporosis, osteogenesis imperfecta and in connection with bone implants.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
 ACCESSION NUMBER: 1999:99644 USPATFULL
 TITLE: Methods and compositions for multiple gene transfer into bone cells
 INVENTOR(S): Bonadio, Jeffrey, Ann Harbor, MI, United States
 Goldstein, Steven A., Ann Harbor, MI, United States
 PATENT ASSIGNEE(S): The Regent of The University of Michigan, Ann Arbor, MI, United States (U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|--|--------------|------|
| PATENT INFORMATION: | US 5942496 | 19990824 | |
| APPLICATION INFO.: | US 1994-316650 | 19940930 (8) | |
| RELATED APPLN. INFO.: | Continuation-in-part of Ser. No. US 1994-199780, filed | | |

on 18 Feb 1994, now patented, Pat. No. US 5763416
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Campell, Bruce R.
ASSISTANT EXAMINER: Nguyen, Dave Trong
LEGAL REPRESENTATIVE: Arnold White & Durkee
NUMBER OF CLAIMS: 130
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 26 Drawing Figure(s); 14 Drawing Page(s)
LINE COUNT: 5310
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 31 OF 38 USPATFULL on STN

TI Morphogen-responsive signal transducer and methods of use thereof
AB A novel gene, DD-10, and its encoded polypeptide chain, DD-10, expressed during early onset of morphogen-induced mammalian tissue morphogenesis, now has been discovered. Accordingly, the invention identifies a new gene which is a novel biological marker of cell differentiation and tissue morphogenesis, particularly of chondroblast or osteoblast cell differentiation and bone tissue morphogenesis. Disclosed are: (a) methods and compositions for screening for and producing morphogen analogs; (b) novel morphogen analogs; (c) downstream inducers of morphogenesis; (d) a novel marker for evaluating morphogen or morphogen analog dosing; and (e) therapeutic methods and compositions using these analogs and/or downstream inducers.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 1999:85291 USPATFULL
TITLE: Morphogen-responsive signal transducer and methods of use thereof
INVENTOR(S): Sampath, Kuber T., Holliston, MA, United States
Takeda, Kohsuke, Ichikawa, Japan
Ichijo, Hidenori, Tokyo, Japan
PATENT ASSIGNEE(S): Creative BioMolecules, Inc., Boston, MA, United States
(U.S. corporation)

| | NUMBER | KIND | DATE |
|---------------------|----------------|------|--------------|
| PATENT INFORMATION: | US 5928940 | | 19990727 |
| APPLICATION INFO.: | US 1996-727118 | | 19961008 (8) |

| | NUMBER | DATE |
|-----------------------|--|---------------|
| PRIORITY INFORMATION: | US 1996-25311P | 19960924 (60) |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | Granted | |
| PRIMARY EXAMINER: | Campell, Bruce R. | |
| LEGAL REPRESENTATIVE: | Testa, Hurwitz & Thibeault, LLP | |
| NUMBER OF CLAIMS: | 29 | |
| EXEMPLARY CLAIM: | 1 | |
| NUMBER OF DRAWINGS: | 13 Drawing Figure(s); 13 Drawing Page(s) | |
| LINE COUNT: | 2733 | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 32 OF 38 USPATFULL on STN

TI Matrix for the manufacture of autogenous replacement body parts
AB Disclosed are matrices, devices and methods for the manufacture of live autogenous skeletal replacement parts comprising plural different tissues.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 1999:61014 USPATFULL
TITLE: Matrix for the manufacture of autogenous replacement body parts

INVENTOR(S) : Khouri, Roger K., St. Louis, MO, United States
 Sampath, Kuber T., Medway, MA, United States
 Rueger, David C., Hopkinton, MA, United States
 Creative BioMolecules, Inc., Hopkinton, MA, United States (U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|--|------|--------------|
| PATENT INFORMATION: | US 5906827 | | 19990525 |
| APPLICATION INFO.: | US 1994-253398 | | 19940603 (8) |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | Granted | | |
| PRIMARY EXAMINER: | Mullis, Jeffrey C. | | |
| LEGAL REPRESENTATIVE: | Testa, Hurwitz & Thibeault, LLP | | |
| NUMBER OF CLAIMS: | 9 | | |
| EXEMPLARY CLAIM: | 1 | | |
| NUMBER OF DRAWINGS: | 5 Drawing Figure(s); 2 Drawing Page(s) | | |
| LINE COUNT: | 383 | | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 33 OF 38 USPATFULL on STN
 TI Terminally sterilized osteogenic devices and preparation thereof
 AB Disclosed are terminally sterilized osteogenic devices for implantation into a mammal. The devices contain a combination of a biologically active osteogenic protein and an insoluble carrier which after being combined are sterilized by exposure to ionizing radiation, for example, by exposure to gamma rays or an electron beam. The terminally sterilized devices of the invention are characterized in that they induce bone formation following implantation into a mammal. Also disclosed is a method for inducing bone formation in a mammal by implanting a terminally sterilized device of the invention into a preselected locus in a mammal. Also disclosed is a method for preparing the terminally sterilized device of the invention.

ACCESSION NUMBER: 97:90970 USPATFULL
 TITLE: Terminally sterilized osteogenic devices and preparation thereof
 INVENTOR(S) : Tucker, Marjorie M., Holliston, MA, United States
 Rueger, David C., Southborough, MA, United States
 Sampath, Kuber T., Holliston, MA, United States
 PATENT ASSIGNEE(S) : Stryker Corporation, Kalamazoo, MI, United States (U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|--|------|--------------|
| PATENT INFORMATION: | US 5674292 | | 19971007 |
| APPLICATION INFO.: | US 1995-478452 | | 19950607 (8) |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | Granted | | |
| PRIMARY EXAMINER: | Kulkosky, Peter F. | | |
| LEGAL REPRESENTATIVE: | Testa, Hurwitz & Thibeault, LLP | | |
| NUMBER OF CLAIMS: | 23 | | |
| EXEMPLARY CLAIM: | 1 | | |
| NUMBER OF DRAWINGS: | 1 Drawing Figure(s); 1 Drawing Page(s) | | |
| LINE COUNT: | 1423 | | |

L6 ANSWER 34 OF 38 DGENE COPYRIGHT 2004 The Thomson Corp on STN
 TI Novel methods for repairing a defect in mammalian nonarticular cartilage tissue or ligaments using an osteogenic protein in a biocompatible, bioresorbable carrier
 AN AAY92441 protein DGENE
 AB Generic Sequence 10 contains generic sequence 9 and an N-terminal extension. Generic sequence 9 is a composite amino acid sequence of the following proteins: human OP-1 to -3, human BMP-2 to

Appl

-6, -9 to -11, Drosophila 60A, Xenopus Vg-1, sea urchin UNIVIN, human CDMP-1 to -3, human and mouse GDF-1, chicken DORSALIN, DPP, Drosophila Screw, mouse NODAL, mouse GDF-8 to -11, human GDF-8, -11, human BMP-15 and rat BMP3b. The specification concerns a novel method for repairing a defect in a non-articular cartilage tissue or a ligament of a mammal, which comprises providing an osteogenic protein in a **biocompatible, bioreversible carrier** to the defect locus to induce the formation of functional replacement cartilage. The methods and implants, promote chondrogenesis and are useful for repairing or correcting a defect in a non-articular cartilage tissue or a ligament of a mammal, e.g. cleft larynx, oedema of the glottis, ulceration of the larynx caused by syphilis, tuberculosis or malignancy, defects resulting from mechanical trauma to the larynx or trachea (including tracheotomy and laryngotomy), laryngeal cancer, and defects of the ear, nose, ribs, vertebral discs, and interarticular menisci.

ACCESSION NUMBER: AAY92441 protein DGENE

TITLE: Novel methods for repairing a defect in mammalian nonarticular cartilage tissue or ligaments using an osteogenic protein in a **biocompatible, bioreversible carrier**

INVENTOR: Vukicevic S; Katic V; Sampath K T

PATENT ASSIGNEE: (STYC) STRYKER CORP.

PATENT INFO: WO 2000020021 A1 20000413

65p

APPLICATION INFO: WO 1999-US17222 19990730

PRIORITY INFO: US 1998-103161 19981006

DOCUMENT TYPE: Patent

LANGUAGE: English

OTHER SOURCE: 2000-317644 [27]

DESCRIPTION: Generic sequence 10, derived from osteogenic protein family members.

L6 ANSWER 35 OF 38 DGENE COPYRIGHT 2004 The Thomson Corp on STN
TI Novel methods for repairing a defect in mammalian nonarticular cartilage tissue or ligaments using an osteogenic protein in a **biocompatible, bioreversible carrier**

AN AAY92440 protein DGENE

AB Generic Sequence 9 is a composite amino acid sequence of the following proteins: human OP-1 to -3, human BMP-2 to -6, -9 to -11, Drosophila 60A, Xenopus Vg-1, sea urchin UNIVIN, human CDMP-1 to -3, human and mouse GDF-1, chicken DORSALIN, DPP, Drosophila Screw, mouse NODAL, mouse GDF-8 to -11, human GDF-8, -11, human BMP-15 and rat BMP3b. The specification concerns a novel method for repairing a defect in a non-articular cartilage tissue or a ligament of a mammal, which comprises providing an osteogenic protein in a **biocompatible, bioreversible carrier** to the defect locus to induce the formation of functional replacement cartilage. The methods and implants, promote chondrogenesis and are useful for repairing or correcting a defect in a non-articular cartilage tissue or a ligament of a mammal, e.g. cleft larynx, oedema of the glottis, ulceration of the larynx caused by syphilis, tuberculosis or malignancy, defects resulting from mechanical trauma to the larynx or trachea (including tracheotomy and laryngotomy), laryngeal cancer, and defects of the ear, nose, ribs, vertebral discs, and interarticular menisci.

ACCESSION NUMBER: AAY92440 protein DGENE

TITLE: Novel methods for repairing a defect in mammalian nonarticular cartilage tissue or ligaments using an osteogenic protein in a **biocompatible, bioreversible carrier**

INVENTOR: Vukicevic S; Katic V; Sampath K T

PATENT ASSIGNEE: (STYC) STRYKER CORP.

PATENT INFO: WO 2000020021 A1 20000413

65p

APPLICATION INFO: WO 1999-US17222 19990730

PRIORITY INFO: US 1998-103161 19981006

DOCUMENT TYPE: Patent

LANGUAGE: English
OTHER SOURCE: 2000-317644 [27]
DESCRIPTION: Generic sequence 9, derived from osteogenic protein family members.

L6 ANSWER 36 OF 38 DGENE COPYRIGHT 2004 The Thomson Corp on STN
TI Novel methods for repairing a defect in mammalian nonarticular cartilage tissue or ligaments using an osteogenic protein in a **biocompatible, bioresorbable carrier**
AN AAY92439 protein DGENE
AB Generic Sequence 8 contains generic sequence 7 (AAY92438), which accommodates the homologies shared among osteogenic protein family members, including OP-1, OP-2, OP-3, BMP-2 to -6, 60A, DPP, Vg-1, Vgr-1 and GDF, as well as an N-terminal addition of 5 residues. The specification concerns a novel method for repairing a defect in a non-articular cartilage tissue or a ligament of a mammal, which comprises providing an osteogenic protein in a **biocompatible, bioresorbable carrier** to the defect locus to induce the formation of functional replacement cartilage. The methods and implants, promote chondrogenesis and are useful for repairing or correcting a defect in a non-articular cartilage tissue or a ligament of a mammal, e.g. cleft larynx, oedema of the glottis, ulceration of the larynx caused by syphilis, tuberculosis or malignancy, defects resulting from mechanical trauma to the larynx or trachea (including tracheotomy and laryngotomy), laryngeal cancer, and defects of the ear, nose, ribs, invertebral discs, and interarticular menisci.

ACCESSION NUMBER: AAY92439 protein DGENE
TITLE: Novel methods for repairing a defect in mammalian nonarticular cartilage tissue or ligaments using an osteogenic protein in a **biocompatible, bioresorbable carrier**
INVENTOR: Vukicevic S; Katic V; Sampath K T
PATENT ASSIGNEE: (STYC) STRYKER CORP.
PATENT INFO: WO 2000020021 A1 20000413 65p
APPLICATION INFO: WO 1999-US17222 19990730
PRIORITY INFO: US 1998-103161 19981006
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2000-317644 [27]
DESCRIPTION: Generic sequence 8, derived from osteogenic protein family members.

L6 ANSWER 37 OF 38 DGENE COPYRIGHT 2004 The Thomson Corp on STN
TI Novel methods for repairing a defect in mammalian nonarticular cartilage tissue or ligaments using an osteogenic protein in a **biocompatible, bioresorbable carrier**
AN AAY92438 protein DGENE
AB Generic Sequence 7 accommodates the homologies shared among osteogenic protein family members, including OP-1, OP-2, OP-3, BMP-2 to -6, 60A, DPP, Vg-1, Vgr-1 and GDF. The specification concerns a novel method for repairing a defect in a non-articular cartilage tissue or a ligament of a mammal, which comprises providing an osteogenic protein in a **biocompatible, bioresorbable carrier** to the defect locus to induce the formation of functional replacement cartilage. The methods and implants, promote chondrogenesis and are useful for repairing or correcting a defect in a non-articular cartilage tissue or a ligament of a mammal, e.g. cleft larynx, oedema of the glottis, ulceration of the larynx caused by syphilis, tuberculosis or malignancy, defects resulting from mechanical trauma to the larynx or trachea (including tracheotomy and laryngotomy), laryngeal cancer, and defects of the ear, nose, ribs, invertebral discs, and interarticular menisci.

ACCESSION NUMBER: AAY92438 protein DGENE

TITLE: Novel methods for repairing a defect in mammalian nonarticular cartilage tissue or ligaments using an osteogenic protein in a **biocompatible, bioresorbable carrier**
INVENTOR: Vukicevic S; Katic V; Sampath K T
PATENT ASSIGNEE: (STYC) STRYKER CORP.
PATENT INFO: WO 200002021 A1 20000413 65p
APPLICATION INFO: WO 1999-US17222 19990730
PRIORITY INFO: US 1998-103161 19981006
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2000-317644 [27]
DESCRIPTION: Generic sequence 7, derived from osteogenic protein family members.

L6 ANSWER 38 OF 38 WPIDS COPYRIGHT 2004 THE THOMSON CORP on STN
TI Novel methods for repairing a defect in mammalian nonarticular cartilage tissue or ligaments using an osteogenic protein in a **biocompatible, bioresorbable carrier**.
AN 2000-317644 [27] WPIDS
CR 2000-317706 [27]
AB WO 20002021 A UPAB: 20041026
NOVELTY - Repairing a defect in a nonarticular cartilage tissue or a ligament of a mammal, comprising providing an osteogenic protein in a **biocompatible, bioresorbable carrier** to the defect locus, inducing the formation of functional replacement cartilage, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (1) an implantable device for repairing a defect in a nonarticular cartilage tissue comprising an osteogenic protein disposed in a devitalized cartilage, a collagen **carrier**, or a carboxymethylcellulose **carrier**; and
- (2) promoting chondrogenesis at a defect locus in a mammal comprising providing an osteogenic protein in a devitalized cartilage **carrier** that is configured to fit into the defect locus.

ACTIVITY - Osteogenic; chondrogenic.

MECHANISM OF ACTION - Osteopathic stimulating implant; transplantation.

USE - The methods and implants are useful for repairing or correcting a defect in a nonarticular cartilage tissue or a ligament of a mammal, e.g. cleft larynx, edema of the glottis, ulceration of the larynx caused by syphilis, tuberculosis or malignancy, defects resulting from mechanical trauma to the larynx or trachea (including tracheotomy and laryngotomy), laryngeal cancer, and defects of the ear, nose, ribs, invertebral discs, and interarticular menisci.

Dwg.0/0

ACCESSION NUMBER: 2000-317644 [27] WPIDS
CROSS REFERENCE: 2000-317706 [27]
DOC. NO. CPI: C2000-096081
TITLE: Novel methods for repairing a defect in mammalian nonarticular cartilage tissue or ligaments using an osteogenic protein in a **biocompatible, bioresorbable carrier**.
DERWENT CLASS: A96 B04 D22
INVENTOR(S): AN, H; MASUDA, K; THONAR, E J A; KATIC, V; SAMPATH, K T; VUKICEVIC, S
PATENT ASSIGNEE(S): (ANHH-I) AN H; (RUSH-N) RUSH PRESBYTERIAN ST LUKE MEDICAL CENT; (STYC) STRYKER CORP; (CREA-N) CREATIVE BIOMOLECULES INC
COUNTRY COUNT: 23
PATENT INFORMATION:

| PATENT NO | KIND DATE | WEEK | LA | PG |
|-----------|-----------|------|----|----|
|-----------|-----------|------|----|----|

WO 2000020021 A1 20000413 (200027)* EN 64
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: AU CA JP US
AU 9952417 A 20000426 (200036)
EP 1117422 A1 20010725 (200143) EN
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
US 2001024823 A1 20010927 (200159)
JP 2002526167 W 20020820 (200258) 70
AU 772479 B2 20040429 (200457)
AU 2004202345 A1 20040624 (200468) #

APPLICATION DETAILS:

| PATENT NO | KIND | APPLICATION | DATE |
|---------------|---------------------------|-----------------|----------|
| WO 2000020021 | A1 | WO 1999-US17222 | 19990730 |
| AU 9952417 | A | AU 1999-52417 | 19990730 |
| EP 1117422 | A1 | EP 1999-937624 | 19990730 |
| | | WO 1999-US17222 | 19990730 |
| US 2001024823 | A1 Provisional
Cont of | US 1998-103161P | 19981006 |
| | | WO 1999-US17222 | 19990730 |
| | | US 2001-828607 | 20010406 |
| JP 2002526167 | W | WO 1999-US17222 | 19990730 |
| | | JP 2000-573380 | 19990730 |
| AU 772479 | B2 | AU 1999-52417 | 19990730 |
| AU 2004202345 | A1 | AU 2004-202345 | 20040526 |

FILING DETAILS:

| PATENT NO | KIND | PATENT NO |
|---------------|-------------------------------|-----------------------------|
| AU 9952417 | A Based on | WO 2000020021 |
| EP 1117422 | A1 Based on | WO 2000020021 |
| JP 2002526167 | W Based on | WO 2000020021 |
| AU 772479 | B2 Previous Publ.
Based on | AU 9952417
WO 2000020021 |
| AU 2004202345 | A1 Div ex | AU 770725 |

PRIORITY APPLN. INFO: US 1998-103161P 19981006; US
2001-828607 20010406; AU
2004-202345 20040526

=> s nonarticular cartilage
L7 28 NONARTICULAR CARTILAGE

=> d his

(FILE 'HOME' ENTERED AT 17:10:16 ON 01 DEC 2004)

FILE 'MEDLINE, USPATFULL, DGENE, EMBASE, WPIDS, FSTA, JICST-EPLUS,
BIOSIS' ENTERED AT 17:10:42 ON 01 DEC 2004

L1 524 S CARRIER AND BIORESORBABLE
L2 367 S L1 AND BIOCOMPATIBLE
L3 22208 S BMP
L4 69969 S OP
L5 2177 S L3 AND L4
L6 38 S L5 AND L2
L7 28 S NONARTICULAR CARTILAGE

=> s l7 and l6
L8 6 L7 AND L6

=> d 18 ti abs ibib tot

L8 ANSWER 1 OF 6 USPATFULL on STN
TI Repair of larynx, trachea, and other fibrocartilaginous tissues
AB Provided herein are methods and devices for inducing the formation of functional replacement **nonarticular cartilage** tissues and ligament tissues. These methods and devices involve the use of osteogenic proteins, and are useful in repairing defects in the larynx, trachea, interarticular menisci, intervertebral discs, ear, nose, ribs and other fibrocartilaginous tissues in a mammal.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2001:165613 USPATFULL
TITLE: Repair of larynx, trachea, and other fibrocartilaginous tissues
INVENTOR(S): Vukicevic, Slobodan, Zagreb, Croatia
Katic, Vladimir, Zagreb, Croatia
Sampath, Kuber T., Holliston, MA, United States
PATENT ASSIGNEE(S): Creative BioMolecules, Inc. (non-U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|---|------|--------------|
| PATENT INFORMATION: | US 2001024823 | A1 | 20010927 |
| APPLICATION INFO.: | US 2001-828607 | A1 | 20010406 (9) |
| RELATED APPLN. INFO.: | Continuation of Ser. No. WO 1999-US17222, filed on 30 Jul 1999, UNKNOWN | | |

| | NUMBER | DATE |
|-----------------------|---|---------------|
| PRIORITY INFORMATION: | US 1998-103161P | 19981006 (60) |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | APPLICATION | |
| LEGAL REPRESENTATIVE: | FISH & NEAVE, 1251 AVENUE OF THE AMERICAS, 50TH FLOOR, NEW YORK, NY, 10020-1105 | |
| NUMBER OF CLAIMS: | 56 | |
| EXEMPLARY CLAIM: | 1 | |
| LINE COUNT: | 1859 | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 2 OF 6 DGENE COPYRIGHT 2004 The Thomson Corp on STN
TI Novel methods for repairing a defect in mammalian **nonarticular cartilage** tissue or ligaments using an osteogenic protein in a **biocompatible, bioresorbable carrier**
AN AAY92441 protein DGENE
AB Generic Sequence 10 contains generic sequence 9 and an N-terminal extension. Generic sequence 9 is a composite amino acid sequence of the following proteins: human OP-1 to -3, human BMP-2 to -6, -9 to -11, Drosophila 60A, Xenopus Vg-1, sea urchin UNIVIN, human CDMP-1 to -3, human and mouse GDF-1, chicken DORSALIN, DPP, Drosophila Screw, mouse NODAL, mouse GDF-8 to -11, human GDF-8, -11, human BMP-15 and rat BMP3b. The specification concerns a novel method for repairing a defect in a non-articular cartilage tissue or a ligament of a mammal, which comprises providing an osteogenic protein in a **biocompatible, bioresorbable carrier** to the defect locus to induce the formation of functional replacement cartilage. The methods and implants, promote chondrogenesis and are useful for repairing or correcting a defect in a non-articular cartilage tissue or a ligament of a mammal, e.g. cleft larynx, oedema of the glottis, ulceration of the larynx caused by syphilis, tuberculosis or malignancy, defects resulting from mechanical trauma to the larynx or trachea (including tracheotomy and laryngotomy), laryngeal cancer, and defects of the ear, nose, ribs, invertebral discs, and interarticular menisci.

ACCESSION NUMBER: AAY92441 protein DGENE
TITLE: Novel methods for repairing a defect in mammalian

nonarticular cartilage tissue or ligaments
using an osteogenic protein in a **biocompatible**,
bioresorbable carrier

INVENTOR: Vukicevic S; Katic V; Sampath K T
PATENT ASSIGNEE: (STYC) STRYKER CORP.
PATENT INFO: WO 2000020021 A1 20000413 65p
APPLICATION INFO: WO 1999-US17222 19990730
PRIORITY INFO: US 1998-103161 19981006
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2000-317644 [27]
DESCRIPTION: Generic sequence 10, derived from osteogenic protein family members.

L8 ANSWER 3 OF 6 DGENE COPYRIGHT 2004 The Thomson Corp on STN
TI Novel methods for repairing a defect in mammalian **nonarticular**
cartilage tissue or ligaments using an osteogenic protein in a
biocompatible, bioresorbable carrier
AN AAY92440 protein DGENE
AB Generic Sequence 9 is a composite amino acid sequence of the following
proteins: human **OP-1** to -3, human **BMP-2** to -6, -9 to
-11, Drosophila 60A, Xenopus Vg-1, sea urchin UNIVIN, human CDMP-1 to -3,
human and mouse GDF-1, chicken DORSALIN, DPP, Drosophila Screw, mouse
NODAL, mouse GDF-8 to -11, human GDF-8, -11, human **BMP-15** and
rat BMP3b. The specification concerns a novel method for repairing a
defect in a non-articular cartilage tissue or a ligament of a mammal,
which comprises providing an osteogenic protein in a
biocompatible, bioresorbable carrier to the
defect locus to induce the formation of functional replacement cartilage.
The methods and implants, promote chondrogenesis and are useful for
repairing or correcting a defect in a non-articular cartilage tissue or a
ligament of a mammal, e.g. cleft larynx, oedema of the glottis,
ulceration of the larynx caused by syphilis, tuberculosis or malignancy,
defects resulting from mechanical trauma to the larynx or trachea
(including tracheotomy and laryngotomy), laryngeal cancer, and defects of
the ear, nose, ribs, invertebral discs, and interarticular menisci.

ACCESSION NUMBER: AAY92440 protein DGENE
TITLE: Novel methods for repairing a defect in mammalian
nonarticular **cartilage** tissue or ligaments
using an osteogenic protein in a **biocompatible**,
bioresorbable carrier
INVENTOR: Vukicevic S; Katic V; Sampath K T
PATENT ASSIGNEE: (STYC) STRYKER CORP.
PATENT INFO: WO 2000020021 A1 20000413 65p
APPLICATION INFO: WO 1999-US17222 19990730
PRIORITY INFO: US 1998-103161 19981006
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2000-317644 [27]
DESCRIPTION: Generic sequence 9, derived from osteogenic protein family
members.

L8 ANSWER 4 OF 6 DGENE COPYRIGHT 2004 The Thomson Corp on STN
TI Novel methods for repairing a defect in mammalian **nonarticular**
cartilage tissue or ligaments using an osteogenic protein in a
biocompatible, bioresorbable carrier
AN AAY92439 protein DGENE
AB Generic Sequence 8 contains generic sequence 7 (AAV92438), which
accommodates the homologies shared among osteogenic protein family
members, including **OP-1**, **OP-2**, **OP-3**,
BMP-2 to -6, 60A, DPP, Vg-1, Vgr-1 and GDF, as well as an
N-terminal addition of 5 residues. The specification concerns a novel
method for repairing a defect in a non-articular cartilage tissue or a
ligament of a mammal, which comprises providing an osteogenic protein in

a **biocompatible, bioresorbable carrier** to the defect locus to induce the formation of functional replacement cartilage. The methods and implants, promote chondrogenesis and are useful for repairing or correcting a defect in a non-articular cartilage tissue or a ligament of a mammal, e.g. cleft larynx, oedema of the glottis, ulceration of the larynx caused by syphilis, tuberculosis or malignancy, defects resulting from mechanical trauma to the larynx or trachea (including tracheotomy and laryngotomy), laryngeal cancer, and defects of the ear, nose, ribs, invertebral discs, and interarticular menisci.

ACCESSION NUMBER: AAY92439 protein DGENE
TITLE: Novel methods for repairing a defect in mammalian **nonarticular cartilage** tissue or ligaments using an osteogenic protein in a **biocompatible, bioresorbable carrier**
INVENTOR: Vukicevic S; Katic V; Sampath K T
PATENT ASSIGNEE: (STYC) STRYKER CORP.
PATENT INFO: WO 2000020021 A1 20000413 65p
APPLICATION INFO: WO 1999-US17222 19990730
PRIORITY INFO: US 1998-103161 19981006
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2000-317644 [27]
DESCRIPTION: Generic sequence 8, derived from osteogenic protein family members.

L8 ANSWER 5 OF 6 DGENE COPYRIGHT 2004 The Thomson Corp on STN
TI Novel methods for repairing a defect in mammalian **nonarticular cartilage** tissue or ligaments using an osteogenic protein in a **biocompatible, bioresorbable carrier**
AN AAY92438 protein DGENE
AB Generic Sequence 7 accommodates the homologies shared among osteogenic protein family members, including OP-1, OP-2, OP-3, BMP-2 to -6, 60A, DPP, Vg-1, Vgr-1 and GDF. The specification concerns a novel method for repairing a defect in a non-articular cartilage tissue or a ligament of a mammal, which comprises providing an osteogenic protein in a **biocompatible, bioresorbable carrier** to the defect locus to induce the formation of functional replacement cartilage. The methods and implants, promote chondrogenesis and are useful for repairing or correcting a defect in a non-articular cartilage tissue or a ligament of a mammal, e.g. cleft larynx, oedema of the glottis, ulceration of the larynx caused by syphilis, tuberculosis or malignancy, defects resulting from mechanical trauma to the larynx or trachea (including tracheotomy and laryngotomy), laryngeal cancer, and defects of the ear, nose, ribs, invertebral discs, and interarticular menisci.

ACCESSION NUMBER: AAY92438 protein DGENE
TITLE: Novel methods for repairing a defect in mammalian **nonarticular cartilage** tissue or ligaments using an osteogenic protein in a **biocompatible, bioresorbable carrier**
INVENTOR: Vukicevic S; Katic V; Sampath K T
PATENT ASSIGNEE: (STYC) STRYKER CORP.
PATENT INFO: WO 2000020021 A1 20000413 65p
APPLICATION INFO: WO 1999-US17222 19990730
PRIORITY INFO: US 1998-103161 19981006
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: 2000-317644 [27]
DESCRIPTION: Generic sequence 7, derived from osteogenic protein family members.

L8 ANSWER 6 OF 6 WPIDS COPYRIGHT 2004 THE THOMSON CORP on STN
TI Novel methods for repairing a defect in mammalian **nonarticular**

AN cartilage tissue or ligaments using an osteogenic protein in a
biocompatible, bioresorbable carrier.

CR 2000-317644 [27] WPIDS

CR 2000-317706 [27]

AB WO 200020021 A UPAB: 20041026

NOVELTY - Repairing a defect in a **nonarticular cartilage** tissue or a ligament of a mammal, comprising providing an osteogenic protein in a **biocompatible, bioresorbable carrier** to the defect locus, inducing the formation of functional replacement cartilage, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) an implantable device for repairing a defect in a **nonarticular cartilage** tissue comprising an osteogenic protein disposed in a devitalized cartilage, a collagen **carrier**, or a carboxymethylcellulose **carrier**; and

(2) promoting chondrogenesis at a defect locus in a mammal comprising providing an osteogenic protein in a devitalized cartilage **carrier** that is configured to fit into the defect locus.

ACTIVITY - Osteogenic; chondrogenic.

MECHANISM OF ACTION - Osteopathic stimulating implant; transplantation.

USE - The methods and implants are useful for repairing or correcting a defect in a **nonarticular cartilage** tissue or a ligament of a mammal, e.g. cleft larynx, edema of the glottis, ulceration of the larynx caused by syphilis, tuberculosis or malignancy, defects resulting from mechanical trauma to the larynx or trachea (including tracheotomy and laryngotomy), laryngeal cancer, and defects of the ear, nose, ribs, invertebral discs, and interarticular menisci.

Dwg.0/0

ACCESSION NUMBER: 2000-317644 [27] WPIDS

CROSS REFERENCE: 2000-317706 [27]

DOC. NO. CPI: C2000-096081

TITLE: Novel methods for repairing a defect in mammalian **nonarticular cartilage** tissue or ligaments using an osteogenic protein in a **biocompatible, bioresorbable carrier**.

DERWENT CLASS: A96 B04 D22

INVENTOR(S): AN, H; MASUDA, K; THONAR, E J A; KATIC, V; SAMPATH, K T; VUKICEVIC, S

PATENT ASSIGNEE(S): (ANHH-I) AN H; (RUSH-N) RUSH PRESBYTERIAN ST LUKE MEDICAL CENT; (STYC) STRYKER CORP; (CREA-N) CREATIVE BIOMOLECULES INC

COUNTRY COUNT: 23

PATENT INFORMATION:

| PATENT NO | KIND DATE | WEEK | LA | PG |
|---|------------------------|------|----|----|
| WO 2000020021 | A1 20000413 (200027)* | EN | 64 | |
| RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE | | | | |
| W: AU CA JP US | | | | |
| AU 9952417 | A 20000426 (200036) | | | |
| EP 1117422 | A1 20010725 (200143) | EN | | |
| R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE | | | | |
| US 2001024823 | A1 20010927 (200159) | | | |
| JP 2002526167 | W 20020820 (200258) | 70 | | |
| AU 772479 | B2 20040429 (200457) | | | |
| AU 2004202345 | A1 20040624 (200468) # | | | |

APPLICATION DETAILS:

| PATENT NO | KIND | APPLICATION | DATE |
|-----------|------|-------------|------|
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| WO 2000020021 | A1 | WO 1999-US17222 | 19990730 |
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| US 2001024823 | A1 Provisional
Cont of | US 1998-103161P | 19981006 |
| | | WO 1999-US17222 | 19990730 |
| | | US 2001-828607 | 20010406 |
| JP 2002526167 | W | WO 1999-US17222 | 19990730 |
| | | JP 2000-573380 | 19990730 |
| AU 772479 | B2 | AU 1999-52417 | 19990730 |
| AU 2004202345 | A1 | AU 2004-202345 | 20040526 |

FILING DETAILS:

| PATENT NO | KIND | PATENT NO |
|---------------|-------------------------------|-----------------------------|
| AU 9952417 | A Based on | WO 2000020021 |
| EP 1117422 | A1 Based on | WO 2000020021 |
| JP 2002526167 | W Based on | WO 2000020021 |
| AU 772479 | B2 Previous Publ.
Based on | AU 9952417
WO 2000020021 |
| AU 2004202345 | A1 Div ex | AU 770725 |

PRIORITY APPLN. INFO: US 1998-103161P 19981006; US
 2001-828607 20010406; AU
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